



BULLETIN No. 5



Manitoba Agricultural College
Winnipeg, Canada

"The Farm Garden."

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Manitoba Agricultural College,
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To the HON. R. P. ROBLIN,

Minister of Agriculture and Immigration,
Winnipeg, Manitoba.

Sir,—I beg to present herewith bulletin No. 5 of the Manitoba Agricultural College, "The Farm Garden," by Prof. F. W. Brodrick. It is hoped that this publication will be of great value to the farmers of Manitoba.

Yours very truly,

W. J. BLACK,
Principal.

"The Farm Garden."

The object of this bulletin is to impress upon the farmers of the Province of Manitoba the advisability of growing more garden vegetables. Carefully compiled statistics have demonstrated that, yearly, large quantities of vegetables are being imported from outside sources to supply the demand of the local markets of the Province. This should not be. Besides, many farmers of the Province do not even grow sufficient vegetables to supply the demand of their own household.

In a country where practically all classes of vegetables can be grown with such good success as they can in Manitoba, there is no reason why every farmer's household should not be provided with a liberal supply of fresh vegetables, and sufficient grown in excess to meet the demands of the local markets.

The liberal use of vegetables will do much to reduce the cost of living, and besides can be made to supply in a palatable form a most healthful class of human food. By exercising care in the selection of varieties, and by carefully arranging the dates of sowing, a liberal supply of succulent vegetables can be provided for practically all seasons of the year. The variety of crop that will be grown will depend very largely upon the personal tastes of the grower and upon the amount of time he will have to devote to this phase of his farm work.

SIZE.

One of the first considerations in planning a garden is to determine the size. The important point in connection with the size is that it should be large enough to meet the needs of the household. Sufficient space should be provided to give a successive supply of vegetables throughout the entire growing season. Conditions will vary somewhat, but one-half acre of well

prepared soil, carefully planned, should provide sufficient vegetables for the ordinary household.

LOCATION.

The location of the garden is also an important consideration. Convenience of access, thorough drainage, suitability of soil and exposure are points that should receive consideration in the selection of the site of the farm garden. Good drainage and a suitable soil are probably the most important considerations. The soil, if possible, should be of a sandy texture and the land preferably should slope slightly to the south or south-east.

ARRANGEMENT.

Much can be done to simplify the work of caring for a garden if the arrangement of the crops is carefully planned. Perennial crops such as asparagus and rhubarb should be placed in some place where they will not interfere with the cultivation of the other crop of the garden. The vine crops such as squash, pumpkins, cucumbers, marrows, etc., should also be placed by themselves.

If properly planned, a considerable part of the heavy work of a farm garden can be done with the aid of the horse and cultivator. The coarser garden crops such as peas, beans, corn, tomatoes, cabbage, cauliflower, potatoes and such crops may be so arranged and planted at such distances (say thirty inches apart) that the work of cultivation may be done with the horse and cultivator.

In planning the garden it is advisable to have the rows as long as possible so that the work with horse and cultivator can be carried on as easily as possible. The root crops such as carrots, parsnips, beets, salsify and onions give better results if grown more closely together and cultivated by hand. Eighteen inches is a good distance apart to plant crops of this class.

A small Planet Junior cultivator is very valuable for work of this nature.

SOIL.

A good garden soil should contain a liberal amount of sand. A moderate sandy loam makes an excellent soil for vegetables. The quality of vegetables depends, to a very considerable extent, on the quality of soil on which they are grown, as vegetables of much finer texture are produced on sandy soils than on those of a clayey nature. Sandy soils will stimulate a much earlier growth than the heavier clay soils. In districts where the soil is of a clayey nature, the lightest land obtainable should be selected for the garden.

CULTIVATION.

The soil for vegetables cannot be too well prepared. Many garden seeds are very fine and require a finely-prepared soil to give a good germination. For this reason it is better to use the same land, providing it is properly enriched for garden purposes, for a number of years. The continued cultivation that is given the land brings it into excellent condition for the purpose of gardening.

Practically all garden crops are benefited by a thorough cultivation of the soil during the season that the crop is growing. The cultivation serves to destroy weeds, conserve moisture, which is very essential for garden crops, and maintain a finer physical condition of the soil, which is also very essential for the successful production of garden crops. This cultivation should be repeated at intervals of a week or two weeks throughout the entire growing season and may be carried on successfully with a hoe and rake or light garden cultivator.

GARDEN SEEDS.

One of the difficulties experienced in gardening is getting good seed, and much of the success of any garden depends on

the quality of seed used. The seedsmen are not always to blame for this state of affairs, as in many cases the growers of the seed themselves are responsible. As a rule the best results are obtained from new, plump, vigorous seed. The most important points to consider in connection with seed are its viability or germinating power and purity as to variety. Many seeds lose their viability in a few years, and a wise precaution is to test the viability of garden seeds before sowing. The matter of purity as to variety is one that has to be left to the honesty of the seedsmen.

THINNING.

In sowing garden seeds, and especially if there is a possibility of the seed being old, it is well to sow an abundance of seed. This thick sowing is likely to ensure a much more reliable stand of plants than where a small quantity of seed is sown. The excessive plants should be removed when the plants are young, usually when they are from two to three inches in height.

TRANSPLANTING.

On account of the shortness of the growing season it is necessary to sow the seed of some garden crops such as celery, cabbage, cauliflower and tomatoes in seed boxes in the house or hotbeds outside early in the season that they may be started and transplanted to the permanent grounds later on. This gives them a much longer growing season and allows them to come to maturity by the time they should be harvested. Seed of celery may be sown about the first of March or the latter part of February.

Cabbage and cauliflower seed may be sown later, or about the first of April. The main essentials in growing plants is to attend carefully to the watering and heat. The soil should be kept moderately moist and an average temperature of 55 to 60 degrees should stimulate good healthy growth. To get the best

results it may be necessary to transplant the young plants from the seed boxes to other boxes at least once before planting out permanently.

The plants may be made much more vigorous and in better condition for permanent transplanting if they are gradually exposed to the outside air for some time before being permanently planted out. This causes the young plants to become stocky and resistant to outside conditions and will give good results when finally planted.

The final transplanting may be done about the first of June. If possible this work should be done in the evening or on a cloudy day. It is a good plan to give the young plants a thorough watering after transplanting and cover them over for a few days with some coarse litter to protect them from the excessive heat of the sun until they become established in the soil.

STORING.

The keeping qualities of vegetables depend very largely on the way in which they are stored. Most garden vegetables keep best when kept at a temperature slightly above freezing. Roots such as carrots, parsnips and turnips can be stored successfully in bins or boxes packed in dry sand. Celery, which is a difficult vegetable to store, may be kept very well by placing the bunches upright in a cool cellar and packing sand about the roots. Cabbage should be stored so that the air will circulate freely about the heads and thereby prevent decay.

Decaying vegetables should be removed from the cellar as soon as possible, as they frequently cause very disagreeable odors and may be injurious to the health of the members of the household.

Garden Crops

A few notes are given on some of the garden crops that may be successfully grown by the western farmer, together with suggestions as to the best varieties to use.

ASPARAGUS.

At the beginning of the vegetable alphabet is found asparagus. It should be found also in every garden in the West, as it is one of the easiest to grow, and never fails. While some advocate trenching and heavy manure before planting, it is sufficient if our soil is plowed or dug twelve inches deep, the roots planted in rows thirty inches apart and two feet apart in the rows. Each fall after frosts set in a heavy coat of well-rotted manure should be applied, and in the spring dug in about the roots. For asparagus, a bed should be set apart by itself, as the one set of roots will continue for years to produce abundantly. Conover's Colossal and Barr's Mammoth are good sorts.

BEANS.

Beans are not a sure crop. They are easily injured or killed at any stage of their growth, and should never be sown too early, and only the earliest varieties grown. They are never out of danger if plants are out of the ground before June 15th. Dwarf Extra Early, Early Six Weeks and Extra Early Refugee are among the best varieties.

BEETS.

This vegetable can be sown as early in the spring as the soil permits. The seed is slow to germinate and will stand a heavy frost. In heavy soil the turnip variety is best, as it grows chiefly on the surface. For light soil the long varieties are better suited, and are rather better keepers than the round sorts, though both varieties can be kept during the winter and spring

by packing in a box or barrel, mixing in dry earth and covering over with three or four inches of earth. Early Eclipse, Early Blood Red are good round varieties, and Long Blood Red and Covent Garden Half Long are good sorts for lighter soil. Sow seed rather thick and two inches deep. Thin out plants four to six inches in rows.

CABBAGE.

Cabbage is easily grown, but for early use should be sown either in a box and kept in a heated room, or sown in a hotbed early in April. When seed is sown either way, the plants when one or two inches above the soil should be transplanted in a box or hotbed, and then planted in a garden. Before planting in the open the plants should be hardened by exposing to the air and sun for a week or ten days. Plants can safely be put out after May 20th, but generally do best about June 1st, as rain usually starts then.

A few early cabbage should be planted for early use, but these are not good keepers and usually crack open and spoil while growing. In this class Early Etamps and Early Jersey Wakefield are satisfactory. For fall use Early Summer and Vandergaw can be planted, and for winter use Large Flat Drumhead and Autumn King are extra good.

In connection with the growing of cabbage, cauliflower and other plants, cut worms are very destructive. Poisoned bran, one part Paris Green to 50 parts moistened bran and a little molasses—not too wet—scattered around the plants, and repeated occasionally, is a reliable remedy.

CAULIFLOWER.

Cauliflower can be grown in much the same manner as cabbage. Only very few of the early cauliflower should be planted at one time, as the heads soon spoil. Planting at intervals of two weeks will prolong the season. Early Snowball, Early Dwarf Erfurt and Early Paris are good and sure varieties.

Late varieties, such as Autumn Giant and Le Normand, seldom mature, but can be pulled before severe frost takes place, placed upright in cellar or other frost-proof place in one or two inches of earth, and the roots covered two inches and kept moist, but not wet. The heads will mature and produce as good cauliflower as in the open, through November and December.

CELERY.

Celery is rather difficult to grow successfully, especially when water is not available. The trench system has been found the best, though it entails a little more labor than planting on the level or in frames. The advantage of the trench is that the roots do not dry out as fast as in either of the other two ways. Less water is required, and bleaching can be done better.

A trench fourteen inches wide and eighteen inches deep is sufficient. At the bottom, six inches of well rotted manure is placed, then six inches of top soil. In this the celery is planted six inches apart, and as the plants grow, earth is placed about them.

Celery can also be grown in a frame placed on the ground, which should be well and deeply dug and manured. Plant six inches apart each way, and water, taking care not to wet the crown, and cover with coarse straw or litter for a few days until they become established.

Celery must be sown early in box or hot beds, as the seed is slow in germinating and the plants are very slow growers at first. Transplant in box or hotbed, giving two inches space to each plant. Plant in the ground after June 1st.

White Plume and Giant Pascal are good varieties.

CARROTS.

Carrots should be sown in the spring as early as the soil permits. Some advocate fall seeding, but the crop is as good from early spring seeding and safer. Any of the ordinary

varieties of garden carrots do extra well. Chantenay, Danvers Half Long and Scarlet Intermediate are very good. Sow one inch deep, and thin three to five inches apart.

CORN.

For sweet green corn the Red and White Cob Cory are probably the best. Plant in rows three feet apart. Sow seed about June 1st.

PARSNIPS.

This is a very acceptable table vegetable, easily grown and a long keeper. Sow early in the spring, one inch deep, and thin to five inches. Satisfactory varieties are Manitoba Prize, Hollow Crown and Student.

ONIONS.

Onion seed may be sown in the fall just before frost sets in. It is, however, better sown early in the spring; or it can be sown like cabbage seed, in box or hothed, and transplanted in the garden, and no class of plants is so easy to transfer or pays better for the trouble. The soil for onions requires to be firm or even hard. Sow one inch deep, tramp well down, and thin plants three to five inches apart. Large Red Wetherfield, Early Australian Brown, Danvers' Yellow Globe and Red Globe are some of the best croppers and keepers.

POTATOES.

Very many fail growing potatoes successfully year after year, chiefly from planting in soil made dry in the preparation. Potato sets, if not cut large, dry rot when planted in dry soil. Only whole potatoes will germinate when planted under such conditions, and many of these die after germination. Potatoes require a loose, mellow soil, moist but not too wet when planted, and this is available each spring only on fallowed land. Sets, cut fairly large, with two eyes in each, planted in rows thirty

inches apart, three or four inches deep and fourteen inches apart in rows, from May 15th to 25th, usually give the largest crop and best tubers.

A few early potatoes should be planted each year, but the main crop should be one of the medium early varieties. The early varieties seldom yield like the others, caused by dry weather when the roots are forming.

In the early sorts Vick's Extra Early, Early Envoy and Early White Prize are good. In the medium early sorts, Beauty of Hebron, Carman No. 1, Bovee, Late Puritan and Manitoba Wonder are very suitable. Very late potatoes should be avoided.

TURNIPS.

All varieties of garden turnips do well in this country, but for quality and keeping no sort approaches the field variety, Purple Top Swede, and this should be the main reliance, except a few of the garden sorts, such as Extra Early Milan or Early White Flat Dutch, for early use. Sow from May 15th to 20th, one inch deep. Thin eight to twelve inches apart.

GARDEN PEAS.

All varieties of garden peas advertised in Canadian catalogues mature as a rule if sown from May 10th to 20th. The very early sorts are not equal in flavor to the medium early, and when only one or two sorts are sown, the latter should be chosen. Sow rather thick, three inches deep.

Alaska, Wm. Hurst, Surprise, Extra Early, are among the best early sorts. Stratagem, Yorkshire, Hero, Queen and Dwarf Telephone and Nott's Excelsior are extra good medium varieties. For succession of green peas sow ten days apart from May 1st to June 1st.

LETTUCE.

Lettuce should be sown at intervals of two weeks from May 1st to July 1st. Big Boston, Grand Rapids, and Silver Ball are good varieties.

RADISH.

Sow from May 15th to June 15th. All sorts are good. White Tipped Scarlet Gem, French Breakfast and Olive Scarlet are extra good.

TOMATOES.

Tomatoes seldom ripen unless protected from cold nights after August 15th. Seed should be sown in box or hotbed early in April, transplanted about June 1st, and protected for two or three weeks.

Spark's Earliana is the safest variety to grow.

CITRON, CUCUMBER AND SQUASH.

Citron, cucumber, squash, pumpkin, etc., can be started in a box or hotbed April 20th to 25th, and planted in garden June 1st. Protection at nights for two or three weeks requires to be given plants set out.

Satisfactory varieties are: Citron, Preserving; cucumber, Short Green, White Spine, Giant Peru and Chicago Pickling; squash, Crookneck.

RHUBARB.

Rhubarb seed can be sown in cold frame or garden from 15th to the end of May, and transplanted the following spring. The bed for rhubarb should be dug twelve to fourteen inches deep, with all the well-rotted manure mixed in that is possible. Each fall a heavy coating of the same sort should be applied as a protection and dug in about the roots in the spring.

Tottel's Improved and Victoria are good varieties.

ACKNOWLEDGEMENTS.

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F. W. BRODRICK.

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LIST OF BULLETINS.

Prepared by Manitoba Agricultural College, Winnipeg, Canada.

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1.	"Classification of the Horse"	Prof. W. H. Peters
2.	"Twelve Noxious Weeds"	(Prof. S. A. Bedford Prof. C. H. Lee
3.	"Care of Milk and Cream"	Prof. J. W. Mitchell
4.	"The Protection of Farm Buildings from Lightning"	Prof. L. J. Smith
5.	"The Farm Garden"	Prof. F. W. Brodriek

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